Canterbury District Health Board
Te Poari Hauora ō Waitaha

Clinical Pharmacology Bulletin

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Treatment of nausea and vomiting during pregnancy

Background

Nausea and vomiting are experienced by up to 80% of pregnant women. This is often referred to as morning sickness, although nausea and vomiting may occur at other times of the day. For the majority of pregnant women these symptoms are limited to the first trimester and are manageable, but for some, the symptoms may persist throughout pregnancy and become severe.

Around 1% of women develop hyperemesis gravidarum where nausea and vomiting may be so severe that dehydration, weight loss and metabolic compromise may occur. In these circumstances there are potentially serious health risks to the mother and the foetus necessitating hospital treatment and referral to Obstetric Services.

Symptom control of morning sickness

This can be approached in a stepwise manner based on the severity of symptoms, where a combination of therapies may be useful in some patients.

Non-pharmacological management may be helpful for some women. This includes the avoidance of nausea and vomiting triggers such as dehydration, hunger, lack of sleep, and strong smells. The intake of frequent, small, carbohydrate rich meals with a low fat content may be useful for management of mild symptoms e.g. a couple of plain biscuits, dry toast or ginger biscuits.

Antiemetics are the mainstay of treatment for women with troublesome nausea and vomiting who are not successfully managed by non-pharmacological measures.

First-line agents are usually well tolerated and have a large body of data to support their use. They include the sedating antihistamine, cyclizine, and the dopamine antagonists; metoclopramide, promethazine and prochlorperazine.

Observational studies of cyclizine or promethazine exposure during the first trimester found no increase in the risk of malformations in exposed infants. Similarly, prospective studies of metoclopramide have not shown increased risk of malformations. Prochlorperazine when used occasionally and in low doses is effective and considered safe to use during pregnancy, despite being implicated in a number of case reports with various congenital abnormalities. More robust studies do not support these findings.

The side effects of these antiemetics are generally mild. Cyclizine, promethazine and prochlorperazine may all cause sedation, dry mouth and other adverse effects that may limit their usefulness in some patients. Metoclopramide has been reported to cause restlessness, drowsiness and fatigue in up to 10% of patients and, less commonly, dystonic reactions (0.2%).

Women with hyperemesis gravidarum may need therapy with more than one antiemetic with different mechanisms of action.

Second-line agents include ondansetron (antagonises serotonin [5HT3] receptors in the gut). Two large studies found an increased risk of anomalies when used in the first trimester, although several other studies found no association with malformations particularly if used in the second or third trimesters. Ondansetron may be necessary in women with severe symptoms who have failed to respond to combination therapy with first-line agents.

Complementary therapies are generally not recommended during pregnancy due to the lack of evidence to support their safety and efficacy. However, the use of these is popular as they are often perceived to be 'safer' than conventional treatments. Pyridoxine (vitamin B6) is used commonly with some data to show safety and efficacy in the treatment of morning sickness. Ginger has also safely been used to treat nausea and vomiting during pregnancy.

Table: management of nausea and vomiting during pregnancy

	Drug (TGA category*)	Dosage	Comments	Funding status
Non-pharmacological	N/A	Small frequent carbohydrate-rich and low fat meals.	A small meal first thing (plain biscuits or dry toast) may be helpful	N/A
First-line therapy	Cyclizine (B3)	25 to 50mg up to three times a day	Side effects such as sedation and dry mouth can occur	Subsidised
	Metoclopramide (A)	10mg three times a day	Side effects such as restlessness, drowsiness and rarely dystonic reactions can occur	Subsidised
	Prochlorperazine (C)	5 to 10mg two to three times a day	Side effects such as sedation, dizziness, dry mouth and dystonia can occur	Subsidised
	Promethazine (C)	10-25mg at bedtime, up to 4-6 hourly (max 100mg daily)	Side effects such as sedation and dry mouth can occur	Subsidised
Second-line therapy	Ondansetron (B1)	4 to 8mg twice daily under specialist obstetrics recommendation only	Side effects such as headache, constipation, and fatigue can occur.	Subsidised
Complementary therapies	Pyridoxine (A)	25mg three times a day	Very large doses may be neurotoxic	Subsidised
	Ginger (A)	Take biscuits as snack	Ginger has been used safely for treatment of nausea and vomiting during pregnancy	N/A

* A – Drugs that have been taken by a large number of pregnant women and women of childbearing age without any proven increase in the frequency of malformations or other direct or indirect harmful effects on the foetus having been observed.
B1 – Drugs which have been taken by only a limited number of pregnant women and women of childbearing age, without an increase in the frequency of malformation or other direct or indirect effects on the human foetus having been observed. Studies in animals have not shown evidence of an increased occurrence of foetal damage.
B3 – Drugs which have been taken by only a limited number of pregnant women and women of childbearing age, without an increase in the frequency of malformation or other direct or indirect harmful effects on the human foetus having been observed. Studies in animals have shown evidence of increased occurrence of foetal damage, the significance of which is considered uncertain in humans.
C – Drugs which, owing to their pharmacological effects, have caused or may be suspected of causing harmful effects on the human foetus or neonate without causing malformations. These effects may be reversible. Accompanying texts should be consulted for further details.